Unified Patent Court
Einheitliches Patentgericht
Juridiction unifiée du brevet

Local Division Mannheim
UPC_CFI_481/2025
UPC_CFI_1358/2025

Decision

of the Court of First Instance of the Unified Patent Court

Local Division Mannheim

delivered on 20 October 2026

concerning EP 3 667 981

HEADNOTES:

1. In the absence of any pointer to the opposite, it must be assumed that a feature in a patent claim has a technical significance within the teaching of the claim and contributes to the teaching and its technical effect.

2. When assessing the disclosure content of an (priority) application, hindsight must be avoided. It is not sufficient that the skilled person having the granted patent claim in mind might recognize elements of the granted patent claim in the priority application and assign them accordingly to features of the granted patent. On the contrary, the subject-matter of the granted patent claim must be directly and unambiguously apparent from the content of the priority application, without prior knowledge of the granted patent claim.

KEYWORDS:

Claim construction, invalid priority claim

CLAIMANT

Huawei Technologies Co. Ltd.,
Huawei Industrial Base, Bantian Longgang - 518129 - Shenzhen - CN

Represented by
Ole Dirks

DEFENDANT

HMD Global Oy,
Bertel Jungin aukio 9 - 02600 - Espoo - FI

Represented by
Oliver Bäcker

PATENT AT ISSUE

European Patent EP 3 667 981

PANEL/DEVISION:

Panel of the Local Division in Mannheim

DECIDING JUDGES:

This decision is delivered by the presiding judge Tochtermann, the judge-rapporteur Böttcher, the legally qualified Schober and the technically qualified judge Augarde.

LANGUAGE OF PROCEEDINGS: English

SUBJECT-MATTER OF THE PROCEEDINGS: Patent infringement and counterclaim for revocation

DATE OF THE ORAL HEARING: 8 September 2026

SUMMARY OF FACTS:

1. Claimant is suing Defendant for the alleged infringement of EP 3 667 981 B1 which relates to a method, a terminal apparatus and a network apparatus for determining feedback information. The granting of the patent-in-suit was published on 2 March 2022. It is based on the PCT application PCT/CN2018/100070 (published in Chinese under WO 2019/029727, English translation as originally filed in Exhibit P3) with published European patent application EP 3 667 981 A1. It has the filing date of 10 August 2018 and claims the priority of the Chinese patent application CN 201710686826 (English translation submitted in exhibit P4) of 11 August 2017. Claimant is the registered proprietor of the patent-in-suit, which is in force in particular in France and German (Exhibit WKS 3). For these UPCA contracting member states, Claimant is seeking declaratory relief, injunctive relief, communication of information, recall, definitive removal, destruction, a declaration on Defendant's liability for damages and an interim award of damages. The opt-out of the patent-in-suit (Art. 83 UPCA) was withdrawn on 12 June 2025.

2. Claims 1 and 5 of the patent-in-suit as granted read as follows in the language of the patent:

   1. A method for processing feedback information, comprising:

   receiving, by a receive end device, time unit format information and a set of hybrid automatic repeat request, HARQ, timing K1 values via radio resource control, RRC, signalings, wherein

each HARQ timing K1 value of the set of HARQ timing K1 values represents a time difference between a time unit for transmitting and bearing a physical downlink shared channel, PDSCH, and a time unit for transmitting a physical uplink control channel, PUCCH, or wherein each HARQ timing K1 value of the set of HARQ timing K1 values represents a time difference between a time unit of a PDSCH and a time unit of a physical uplink shared channel, PUSCH, where PUCCH/PUSCH are used to transmit HARQ feedback information corresponding to the PDSCH;
the time unit format information comprises a quantity of time units configured for bearing uplink transmission in a configuration period and/or a quantity of time units configured for bearing downlink transmission in a configuration period;
determining, by the receive end device, a quantity of HARQ feedback information bits based on the set of HARQ timing K1 values and the time unit format information; and
sending, by the receive end device, the HARQ feedback information**.**

5. A receive end device, comprising:

a transceiver (2108), configured to receive time unit format information and a set of hybrid automatic repeat request, HARQ, timing K1 values via radio resource control (RRC) signalings, wherein
each HARQ timing K1 value of the set of HARQ timing K1 values represents a time difference between a time unit for transmitting and bearing a physical downlink shared channel, PDSCH, and a time unit for transmitting a physical uplink control channel, PUCCH, or wherein each HARQ timing K1 value of the set of HARQ timing K1 values represents a time difference between a time unit of a PDSCH and a time unit of a physical uplink shared channel PUSCH, where PUCCH/PUSCH are used to transmit HARQ feedback information corresponding to the PDSCH;
the time unit format information comprises a quantity of time units configured for bearing uplink transmission in a configuration period and/or a quantity of time units configured for bearing downlink transmission in a configuration period; and
a processor (2104), configured to determine a quantity of HARQ feedback information bits based on the set of HARQ timing K1 values and the time unit format information, wherein
the transceiver is further configured to send the HARQ feedback information to the transmit end device.

3. Defendant, a manufacturer of mobile devices with worldwide business activities, offers and markets 5G-capable terminal devices (“attacked embodiments”), such as mobile phones and tablets, in France and Germany, in particular the phones „HMD Skyline“, „HMD Fusion“, „HMD XR21“ und „Nokia G60 5G“. Claimant asserts that Defendant directly and indirectly infringes upon the patent-in-suit through the attacked embodiments because the 5G telecommunication standard allegedly makes use of the teaching of the patent-in-suit.

4. The 5G standard comprises in particular the following standard specification documents:

- Technical specification ETSI TS 138 213 V15.6.0 (2019-07) (exhibit WKS 6, “**TS 138 213**”)

- Technical specification ETSI TS 138 214 V15.3.0 (2018-10) (exhibit WKS 7, “**TS 138 214**”)

- Technical specification ETSI TS 138 331 V15.10.0 (2020-07) (exhibit WKS 8, "**TS 138 331**")

5. Section 9.1. of TS 138 213 (exhibit WKS 6) relates to the HARQ codebook determination. Its subsection 9.1.2.1 contains the following excerpt:

> 9.1.2.1 Type-1 HARQ-ACK codebook in physical uplink control channel
>
> For a serving cell c, an active DL BWP, and an active UL BWP, as described in Subclause 12, the UE determines a set of $M_{A,c}$ occasions for candidate PDSCH receptions for which the UE can transmit corresponding HARQ-ACK information in a PUCCH in slot n_U. If serving cell c is deactivated, the UE uses as the active DL BWP for determining the set of $M_{A,c}$ occasions for candidate PDSCH receptions a DL BWP provided by *firstActiveDownlinkBWP*. The determination is based:
>
> a) on a set of slot timing values K_1 associated with the active UL BWP
>
> a) If the UE is configured to monitor PDCCH for DCI format 1_0 and is not configured to monitor PDCCH for DCI format 1_1 on serving cell c, K_1 is provided by the slot timing values {1, 2, 3, 4, 5, 6, 7, 8} for DCI format 1_0
>
> b) If the UE is configured to monitor PDCCH for DCI format 1_1 for serving cell c, K_1 is provided by *dl-DataToUL-ACK* for DCI format 1_1
>
> b) on a set of row indexes R of a table that is provided either by a first set of row indexes of a table that is provided by *pdsch-TimeDomainAllocationList* in *pdsch-ConfigCommon* or by Default PDSCH time domain resource allocation A [6, TS 38.214], or by the union of the first set of row indexes and a second set of row indexes, if provided by *pdsch-TimeDomainAllocationList* in *pdsch-Config*, associated with the active DL BWP and defining respective sets of slot offsets K_0, start and length indicators *SLIV*, and PDSCH mapping types for PDSCH reception as described in [6, TS 38.214]
>
> c) on the ratio $2^{\mu_{DL}-\mu_{UL}}$ between the downlink SCS configuration μ_{DL} and the uplink SCS configuration μ_{UL} provided by *subcarrierSpacing* in *BWP-Downlink* and *BWP-Uplink* for the active DL BWP and the active UL BWP, respectively
>
> d) if provided, on *tdd-UL-DL-ConfigurationCommon* and *tdd-UL-DL-ConfigurationDedicated* as described in Subclause 11.1.
>
> For the set of slot timing values K_1, the UE determines a set of $M_{A,c}$ occasions for candidate PDSCH receptions or SPS PDSCH releases according to the following pseudo-code. A location in the Type-1 HARQ-ACK codebook for HARQ-ACK information corresponding to a SPS PDSCH release is same as for a corresponding SPS PDSCH reception.

6. What follows is a pseudo-code for which Claimant has submitted, in its Statement of claim ("**SoC**", para. 103) and additionally in exhibit WKS 10 (with deduction shown in exhibit WKS 9), a simplified version with numbered lines reflecting the parts relevant to the case at hand.

7. Defendant who raised a FRAND defence filed a counterclaim for revocation. Claimant submitted a conditional Application to amend the patent. Apart from the Statement of claim, the parties set out their arguments regarding the non-technical part of the dispute regarding the FRAND defence and exhaustion in separate briefs ("**SoD II**", "**Reply II**",

"**Rejoinder II**") accompanying their regular briefs on the technical part of the infringement action ("**SoD I**", "**Reply I**", "**Rejoinder I**").

8. The language of the proceedings was changed from German to English by order of 12 September 2025. The Statement of claim remained in German after consultation with the TQJ. However, Claimant was ordered to submit and submitted an English translation of its requests on the merits by brief of 18 May 2026.

9. By brief of 30 October 2025, Defendant requested to order Claimant to produce licence agreements with third parties. In response, Claimant requested to order it to produce (only) certain licence agreements from this group (brief of 24 November 2025). By order of 15 December 2025 ("**Production Order**"), the judge-rapporteur granted Claimant's production request and dismissed Defendant's further motion to produce additional and unredacted licence agreements as (at least currently) unfounded. After extensions of the time period for producing the licence agreements encompassed by the order of 15 December 2025 with Defendant's consent, and following discussions between Claimant and its licensees, Claimant produced the licence agreements (exhibits WKS Kar 14 to 19), partly in (heavily) redacted versions, on 29 January 2026 (together with its Reply (FRAND part) in the infringement proceeding). On 27 March 2026, Defendant filed a further request pursuant to R. 190 RoP to order Claimant to produce unredacted versions of the licence agreements covered by the Production Order. By order of 5 May 2026, the judge-rapporteur dismissed this request at that stage of the proceedings. For further details, reference is made to the Production Order and the Order of 5 May 2026.

10. By Order of 18 December 2025, the judge-rapporteur ordered Claimant to provide security for costs.

11. By brief of 8 July 2026, in response to the notification of the date when the judge-rapporteur intended to close the written procedure, Claimant filed a request under R. 36 RoP to permit the parties further submissions on new developments in the license negotiations after their respective last regular brief in the infringement proceeding. By brief of 16 July 2026, Defendant joined that request in principle. By Order of 23 July 2026, the judge-rapporteur dismissed the requests under R. 36 RoP. In the same order, taking into account that there are regularly new developments in licence negotiations that do not fit into the time period regime of the RoP, the judge-rapporteur granted both sides the

opportunity to submit an additional written brief in the interim procedure until 25 August 2026 (i.e. two weeks before the oral hearing), which shall be strictly limited to new developments in the licence negotiations between the parties' group of companies since their respective last brief in this regard, whereby the final decision on the admissibility of any such submission in the single case was left to the panel. For further details, in particular regarding formal restrictions set for those briefs, it is referred to the Order of 23 July 2026. Both parties responded by filing briefs updating the developments in their licence negotiation on 25 August 2026. By unsolicited briefs of 4 and 6 September 2026, the parties informed the court in particular about further developments in their licence negotiations. By further unsolicited brief of 30 September 2026, Defendant elaborated on further developments after the closure of the oral hearing. By another unsolicited brief of 6 October 2026, Defendant filed applications for an order to produce evidence (R. 190 RoP) concerning a third-party licence agreement, for allowing the exchange of further written pleadings thereon (R. 9.1 RoP) and for reopening the oral hearing (R. 114 RoP).

12. By Order of 26 (concerning technical aspects, namely construction, priority and added-matter) and 31 August 2026 (concerning FRAND aspects of the case) respectively, the judge-rapporteur provided the parties with provisional remarks on points that may be the focus of the discussion during the oral hearing.

13. The parties are engaged in a plurality of legal disputes regarding patent infringement apart from the present proceedings. In November 2022, Claimant filed three infringement actions against Defendant with the Regional Court Munich I ("**RC Munich I**") that are currently pending before the appellate court ("**Munich national proceedings I**"). End of October 2025, Claimant filed two further infringement actions against Defendant before the RC Munich I (case numbers 7 O 13729/25 and 7 O 13912/25, "**Munich national proceedings II"**).

REQUESTS OF THE PARTIES

INFRINGEMENT ACTION

14. Claimant originally requested in the Statement of Claim:

I. that it be declared that the Defendant has infringed European patent EP 3 667 981;

II. that the Defendant be ordered,

1. to refrain

a) from offering, placing on the market, using, importing or possessing for the aforementioned purposes

receive end devices

in the territory of the Federal Republic of Germany and the French Republic,

comprising:

a transceiver, configured to receive time unit format information and a set of hybrid automatic repeat request (HARQ) timing K1 values via radio resource control (RRC) signalings, wherein each HARQ timing K1 value of the set of HARQ timing K1 values represents a time difference between a time unit for transmitting and bearing a physical downlink shared channel (PDSCH), and a time unit for transmitting a physical uplink control channel (PUCCH), or wherein each HARQ timing K1 value of the set of HARQ timing K1 values represents a time difference between a time unit of a PDSCH and a time unit of a physical uplink shared channel PUSCH, where PUCCH/PUSCH are used to transmit HARQ feedback information corresponding to the PDSCH; the time unit format information comprises a quantity of time units configured for bearing uplink transmission in a configuration period and/or a quantity of time units configured for bearing downlink transmission in a configuration period; and a processor (2104), configured to determine a quantity of HARQ feedback information bits based on the set of HARQ timing K1 values and the time unit format information, wherein the transceiver is further configured to send the HARQ feedback information to the transmit end device;

(Claim 5, direct infringement)

especially if

the processor is configured to determine, the quantity of the HARQ feedback information bits based on a size of the set of the HARQ timing K1 values and the quantity of time units configured for bearing uplink transmission in a time window, wherein the time window is a downlink time unit set whose HARQ feedback information needs to be fed back in one uplink time unit;

(subclaim 6)

and

the processor is specifically configured to: determine a time unit set based on the size of the set of the HARQ timing K1 values; when the time unit set comprises a time unit for uplink transmission, exclude the time unit used to bear uplink transmission from the time unit set; and determine the quantity of the HARQ feedback information bits based on a time unit set obtained after excluding the time unit used to bear uplink transmission;

(subclaim 7)

and/or

b) from offering and/or supplying

receive end devices

to third parties other than those authorized to use the patented invention in the territory of the Federal Republic of Germany and the French Republic,

which are set up to carry out a method for processing feedback information, comprising the following:

receiving, by a receive end device, time unit format information and a set of hybrid automatic repeat request (HARQ) timing K1 values via radio resource control (RRC) signalings, wherein each HARQ timing K1 value of the set of HARQ timing K1 values represents a time difference between a time unit for transmitting and bearing a physical downlink shared channel (PDSCH), and a time unit for transmitting a physical uplink control channel (PUCCH), or wherein each HARQ timing K1 value of the set of HARQ timing K1 values represents a time difference between a time unit of a PDSCH and a time unit of a physical uplink shared channel, PUSCH, where PUCCH/PUSCH are used to transmit HARQ feedback information corresponding to the PDSCH; the time unit format information comprises a quantity of time units configured for bearing uplink transmission in a configuration period and/or a quantity of time units configured for bearing downlink transmission in a configuration period; determining, by the receive end device, a quantity of HARQ feedback information bits based on the set of HARQ timing K1 values and the time unit format information; and sending, by the receive end device, the HARQ feedback information;

(Claim 1, indirect infringement)

especially if

the determining, by the receive end device, a quantity of HARQ feedback information bits based on the set of HARQ timing K1 values and the time unit format information comprises: determining, by the receive end device, the quantity of the HARQ feedback information bits based on a size of the set of the HARQ timing K1 values and the quantity of time units configured for bearing uplink transmission in a time window, wherein the time window is a downlink time unit set whose HARQ feedback information needs to be fed back in one uplink time unit;

(subclaim 2)

and

the determining the quantity of the HARQ feedback information bits comprises: determining a time unit set based on the size of the set of the HARQ timing K1 values; when the time unit set comprises a time unit used to bear uplink transmission, excluding the time unit used to bear uplink transmission from the time unit set; and determining the quantity of the HARQ feedback information bits based on the time unit set obtained after excluding the time unit used to bear uplink transmission from the time unit set.

(subclaim 3)

2. to provide the Claimant with information in electronic form, which can be evaluated by means of a computer, on the extent to which it - the Defendant - has committed the acts referred to in section II.1. since 2 March 2022, in the form of a list, structured for each month of a calendar year and by infringing products, of all relevant information on the infringing products referred to in section II.1, stating in particular

   a) the origin and distribution channels of the infringing products;
   b) the quantities produced, manufactured, delivered, received or ordered and the prices paid for the infringing products;
   c) the identity of all third parties involved in the manufacture or distribution of the infringing products;

   copies of the corresponding purchase documents (namely invoices, alternatively delivery bills) must be submitted as proof of the information, while details requiring confidentiality outside the data subject to disclosure may be blacked out;

3. to provide the Claimant with an orderly statement in writing and additionally in electronic form of the extent to which it - the Defendant - has committed the acts described above under II.1. since 2 March 2022, stating

   a) the individual deliveries, broken down by delivery quantities, times and prices as well as type designations and the names and addresses of the customers;
   b) the individual offers, broken down by offer quantities, times, prices, type designation and the names and addresses of the commercial offerees;
   c) the advertising operated, broken down by advertising media, their circulation figures, distribution period and distribution area;
   d) the prime costs broken down by the individual cost factors and the profit generated;

   the Defendant reserves the right to disclose the names and addresses of the non-commercial purchasers and the offerees, instead of to the Claimant, to a sworn auditor residing in one of the Contracting Member States, to be designated by the Claimant and bound to secrecy towards it, provided that the Defendant bears his costs and authorizes and obliges him to inform the Claimant on specific request whether a particular purchaser or offeree is included in the list.

4. The Defendant is ordered, at its own expense

   a) to recall the marketed products referred to in request II.1. from the commercial customers with reference to the patent infringing condition of the products established by the court (judgment of the Mannheim Local Division dated [date]) and with the binding undertaking to reimburse any fees and to bear any necessary packaging and transportation costs as well as customs and storage costs associated with the return;

   b) to permanently remove the products mentioned under II.1. from the distribution channels by the Defendant taking back these items, if necessary enforcing their surrender with claims for surrender to which it is entitled or, at the Defendant's discretion, arranging for the destruction of these items at the respective owner's premises at the Defendant's expense;

   c) to hand over to a bailiff to be appointed by the Claimant for the purpose of destruction the products mentioned under II.1. which are in its - the Defendant's - direct or indirect possession or ownership within the scope of application of the UPCA existing at the time of the oral hearing.

III. It is ordered that in the event of any breach of the order, the Defendant shall

a) pay a repeated penalty of at least EUR 10,000.00 for each day of non-compliance of request II.1.;

b) pay a repeated penalty of at least EUR 5,000.00 per day for each day of non-compliance with request II.2.;

c) pay a repeated penalty of at least EUR 5,000.00 per day for each day of non-compliance with request II.3.;

d) after a period of 30 days, pay a repeated penalty of at least EUR 5,000.00 for each day of non-compliance with request II.4.,

to the Court.

IV. The Defendant is further ordered

a) to pay EUR 127,000 as provisional damages to the Claimant,

b) to compensate all further damages that the Claimant has incurred or will incur in the future as a result of the acts referred to in request II.1. committed since 2 March 2022;

V. The Defendant is ordered to bear the costs of these proceedings.

15. The foregoing reproduction is the English translation of the operative part of the German Statement of claim, as filed by Claimant by brief of 18 May 2026 that was not contested.

16. By brief of 2 September 2026, in response to the JR's order of 26 August 2026 that prepared the oral hearing, Claimant made the following amendments to some requests in the operative part of its Statement of claim (amended passages highlighted in blue):

Amendments to Request No. II.2:

2. to provide the Claimant with information in electronic form that can be evaluated by means of a computer on the extent to which it - the Defendant - has committed the acts referred to in section II.1. since 2 March 2022, in the form of **a list of information on the infringing products referred to in section II.1 (structured for each month of a calendar year and by infringing products), stating**

[...]

Amendments to Request No. II.4:

4. The Defendant is ordered, at its own expense

   a) to recall the marketed products referred to in **request II.1.a.** from the commercial customers with reference to the patent infringing condition of the products established by the court (judgment of the Mannheim Local Division dated [date]) and with the binding undertaking to reimburse any fees and to bear any necessary packaging and transportation costs as well as customs and storage costs associated with the return;

   b) to permanently remove the products mentioned **under II.1.a** from the distribution channels by the Defendant taking back these items, if necessary enforcing their surrender with claims for surrender to which it is entitled or, at the Defendant's discretion, arranging for the destruction of these items at the respective owner's premises at the Defendant's expense;

   c) to hand over to a bailiff to be appointed by the Claimant for the purpose of destruction the products **that (i) have been the subject-matter of infringing acts in France or Germany pursuant to request II.1.a and that (ii) are in Defendant's** direct or indirect possession or ownership within the scope of application of the UPCA existing at the time of the oral hearing;

Amendments to Requests No. IV. and No. V:

IV. **It is declared that Defendant shall** compensate all further damages that the Claimant has incurred or will incur in the future as a result of the acts referred to in request II.1. committed since 2 March 2022.

V. The Defendant is further ordered

   1. to pay EUR 127,000 as provisional damages to the Claimant,

   2. to bear the costs of these proceedings.

17. In its Reply I to Defendant's Statement of defence concerning the technical part, having regard to its conditional Application to amend the patent and the order of priority of the auxiliary requests as stated therein, Claimant further requests in the infringement proceeding:

> in the event that the Local Chamber does not grant the requests set out in the Statement of Claim (under points I. to V.) with regard to the granted version of the patent in suit, the respective claims for declaration (I.), injunctive relief (II.1), information/accounting (II.2 and II.3), recall, removal from distribution channels and destruction (II.4), repeated penalty payments (III.) determination of liability for damages (IV.) and costs (V.) will be granted for the patent in suit with the wording of the respective auxiliary requests in the order listed.

18. Defendant requests (cf. its SoD I regarding the technical part of the dispute):

> **I. that the infringement action be dismissed in its entirety, and**
>
> **II. that Claimant be ordered to bear the costs of the proceedings and the legal costs incurred by Defendant.**

[requests II. and III. relate to the counterclaim for revocation, requests V. and VI. relate to procedural requests that are not relevant to the decision at hand]

In the alternative to I. and II., Defendant requests:

> **VII. that the Court rejects Claimant's asserted claims for injunctive relief, recall, and removal from distribution channels as (currently) unfounded.**

In the further alternative to I. and II., Defendant requests:

> **VIII. that the Court rejects Claimant's asserted claims for injunctive relief, recall, and removal from distribution channels as disproportionate.**

In the absolute alternative to I. and II., Defendant requests:

> **IX. that the judgment is not provisionally enforceable.**

In the further absolute alternative to I. and II., Defendant requests:

> **X. that the Defendant is permitted to avert enforcement by providing security.**

In the further absolute alternative to I. and II., Defendant requests:

> **XI. that the enforcement of the judgment be made subject to prior provision of security by Claimant in the amount of:**
>
> **a) at least EUR 750,000 for the claims for injunctive relief, recall, removal and destruction (Claimant's requests II.1 and II.4.);**
>
> **b) at least EUR 25,000 for the claim for disclosure of information and rendering of accounts (Claimant's request II.2.); and**
>
> **c) at least EUR 25,000 for the claim for rendering of accounts (Claimant's request II.3.); and**
>
> **d) at least EUR 127,000 for the claim for payment of provisional damages (Claimant's request IV.a))**

19. As a precaution measure, Defendant, based on its FRAND defence, in addition requests to (cf. SoD II regarding the non-technical defence, para. 309):

stay the present proceedings pursuant to Rule 266 para. 5 RoP and refer the following questions, in particular, to the Court of Justice of the European Union for a preliminary ruling pursuant to Article 267 TFEU:

(1) Does the decision of the CJEU in Case C-170/13 provide for a sequential order of examination, such that the procedural steps specified in that decision are to be examined by the court of first instance one after the other and interdependently of each other when the FRAND objection is raised, so that

i. in particular, step 4 (counteroffer of the patent user) is only examined in court if the prior examination of step 3 has concluded that the patent holder submitted an offer on FRAND terms before the complaint was filed, and

ii. the judicial review must end, and the FRAND objection must be granted if the step 3 review concludes that the patent holder did not make an offer on FRAND terms before the complaint was filed?

(2) Can a more detailed judicial FRAND examination – i.e., in particular the examination under step 3 as to whether the patentee has made a FRAND offer prior to bringing an action – be made dependent on whether the patent user has fulfilled the subsequent steps, i.e., whether it has made a counter-offer or provided adequate security?

(3) In the event that question (2) is answered in the affirmative: can a closer judicial examination of step 3 be omitted if the examination of subsequent steps shows that these steps were not, or were not sufficiently, fulfilled?

(4) What are the requirements for adequate security? Is security considered adequate only if it is provided in the amount of the offer submitted by the patent holder, or can it also be regarded as adequate if it corresponds to the amount of the patent user's counter-offer?

COUNTERCLAIM FOR REVOCATION

20. With regard to its Counterclaim for revocation (UPC_CFI_1358/2025, "**CCfR**"), Defendant originally requested:

III. the European patent EP 3 667 981 B1 is revoked to the extent of claims 1, 2, 3, 5, 6, and 7 as well as claims 8, 9, and 10 in-sofar they refer to claims 1, 2, and 3 or claims 5, 6, and 7, respectively, with effect in the territory of all UPC countries for which the patent is in force, in particular Germany and France (R. 25 (a) RoP);

IV. Claimant shall bear the costs of the revocation proceedings and the legal costs incurred by Defendant.

21. By brief of 2 September 2026, in response to the JR's order of 26 August 2026 that prepared the technical aspects of the upcoming oral hearing, Defendant made the following amendment to the main request for revocation from its counterclaim for revocation:

    - *to revoke the patent-in-suit to the extent of claims 1, 2, 3, 5, 6, and 7 as well as claims 8, 9, and 10 insofar they refer to claims 1, 2, and 3 or claims 5, 6, and 7, respectively, with effect in the territory of ~~all UPC countries for which the patent is in force, in particular~~ Germany and France (R. 25 (a) RoP); and*

22. Claimant, in its Reply I containing the technical part of the Reply in relation to the infringement action, the Defence to the counterclaim and an (conditional) Application to amend the patent, requests:

    I. the Counterclaim for Revocation is dismissed;
    II. the Defendant and Counterclaim-Claimant bears the costs of the proceedings.

    Alternatively, in the event that the Local Division does not grant the main request, regarding an amendment of the patent pursuant to Art. 65 UPCA in conjunction with R. 30.1 RoP, Claimant requests that

    I. the patent in suit is upheld in restricted form on the basis of the attached sets of claims in accordance with auxiliary requests 1-6 (in the order specified), whereby the auxiliary requests are explained at the end of this brief (section C) and are submitted as Exhibits 12a-17b;
    II. the Counterclaim for Revocation is dismissed in all other respects;
    III. the Defendant and Counterclaim-Claimant bears the costs of the proceedings.

23. In its Rejoinder I containing the Rejoinder regarding the technical part in relation to the infringement action, the Reply to the Defence to the CCfR and the Defence to the Application of the patent, Defendant requests with regard to the Application to amend the patent and the auxiliary requests based thereon:

I. **that the infringement action be dismissed;**

II. **that the amendments be declared inadmissible;**

III. **that the Auxiliary Requests 1 to 6 be rejected and the patent-in-suit be revoked in its entirety;**

IV. **that Claimant be ordered to bear the costs of the proceedings.**

24. Notwithstanding the use of the word "entirety" in request No. III. above, Defendant confirmed in its aforementioned brief of 2 September 2026 that its request for revocation (still) does not relate to the patent claims 11 and 12 as granted. It still does not relate to claim 4 as granted either.

25. By its aforementioned brief of 2 September 2026, Claimant stated that it wishes to defend independent claims 2, 3, 5, 7 as granted separately and with priority over its auxiliary requests 1 to 6, and accordingly re-worded its auxiliary requests to uphold the patent-in-suit in a limited form as follows (with the originally separate request numbering for the auxiliary part being changed to a consecutive numbering system which also includes the numbering of the requests in the infringement proceeding and the main requests in the CCfR proceeding):

(new wording for former Request No. I. of the auxiliary requests)

VIII. the patent in suit is upheld **to the following extent: (i) the combination of claims 1+2 and the combination of claims 5+6 as independent claims; (ii) the combination of claims 1+2+3 and the combination of claims 5+6+7 as independent claims; (iii) in restricted form based on auxiliary requests 1-6 (in the order specified), whereby auxiliary requests 1-6 have been submitted as Exhibits 12a-17b;**

POINTS AT ISSUE

26. The parties are in dispute about several aspects of the case at hand.

CLAIM CONSTRUCTION

27. The parties disagree on several points regarding the construction of claim 1. With regard to claim 5 they both, however, agree that there is no significant difference in the construction of the relevant features in comparison to claim 1. Moreover, Claimant did not contest Defendant's view that the same holds true with regard to independent claims 9 and 10 that are also attacked by the CCfR and that refer *inter alia* to claim 1.

Time unit, time unit information and feature 1.2

28. Claimant opines that a time unit is not further specified apart from feature 1.1.4 and can hence be any reference interval used to express timing parameters. According to Claimant, the skilled person knows a time unit can be divided into sub-units. In its view, time unit format information is not the same as the time unit itself, but is related thereto. It can also comprise information on the sub-units of a time unit. The format/configuration can be addressed on the level of sub-units and the time unit information used in feature 1.2 may accordingly relate to the level of sub-units. In Claimant's opinion, Defendant – apart from the fact that the teaching of claim 1 must not be restricted to Embodiment 3 – interprets Embodiment 3 impermissibly narrowly. According to Claimant, Embodiment 3 leaves it open, under which circumstances a time unit qualifies as a time unit for downlink (DL) transmission and when for uplink (UL) transmission. In consequence, according to Claimant, a "time unit" (e.g. a slot) can be configured with reference to lower-level units in the hierarchy (e.g. symbols) within the time unit format information. Claimant asserts that there is not technical reason to the contrary.

29. In Defendant's opinion, the term "time unit" that may refer to a slot, a symbol, and the like (para. [0109], Fig. 14) is to be understood in the same way throughout the patent claim. In consequence, the time unit information used in feature 1.2 must relate to the same time unit level on which the K1 values of feature group 1.1 are defined. If this time unit level, on which the K1 values are defined, is for instance the level of slots, Defendant concludes that the time unit information, based on which a quantity of HARQ feedback information bits is determined in accordance with feature 1.2, must also relate to the level of slots. In Defendant's view, it is therefore not sufficient in such a situation, if the determination of said quantity of HARQ feedback information bits were made on the basis of symbols being sub-units of a slot. According to Defendant, it is crucial for the claimed operation and functionality to work, that the K1 values define time differences between "time units" that are the same "time units", that are defined by the "time unit format information" used in feature 1.2. Defendant argues that this is further confirmed by Embodiment 3, the sole example that is at least partially in accordance with claim 1, in which the same single level of time units, i.e. a slot, is also used for the determination of said quantity of HARQ feedback information bits.

Exhaustiveness of the parameters specified in feature 1.2

30. Claimant opines that the parameters the determination according to feature 1.2 is based upon are not exhaustive, so that further parameters may be used in addition to those mentioned in feature 1.2.

31. Defendant takes the view that, according to feature 1.2, the determination of said quantity of HARQ feedback information bits is based exclusively on the parameters specified therein; in other words, no further information may be required or used. According to Defendant, this is again confirmed by the Embodiment 3 that does not use further information/parameters for the determination.

32. For further details on the claim construction by the parties, reference is made to their briefs.

INFRINGEMENT/IMPLEMENTATION

33. There is no relevant dispute regarding the actual design of the 5G standard. As far as the parties come to different conclusions as to whether the 5G standard implements the teaching of the patent-in-suit, this is essentially based on a different understanding of claims 1 and 5.

LEGAL CONSEQUENCES

FRAND DEFENCE

34. Defendant raises a FRAND defence, which Claimant considers unfounded. For further details, it is referred to the parties' briefs and exhibits.

FURTHER POINTS

35. The parties are in dispute about several points regarding the legal consequences of a possible infringement. In particular, they argue about whether Claimant has sufficiently substantiated infringing acts and the applicable national French and German law for any acts prior to the entry into force of the UPCA on 1 June 2023. Another dispute relates to whether injunctive relief and corrective measures are proportionate in the case at hand. For further details and further points in dispute reference is made to the parties' briefs and exhibits.

COUNTERCLAIM FOR REVOCATION

36. Defendant bases its Counterclaim for revocation, which is directed against the independent claims 1, 5, 9 and 10 and the dependent claims 2, 3, 6, 7 and 8 on the following grounds of Art. 138 EPC in conjunction with Art. 65 (2) UPCA:

    - added matter (Art. 138(1)(c) EPC),
    - insufficient disclosure (Art. 138(1)(b) EPC),
    - lack of novelty (Art. 138(1)(a) in conjunction with Art. 54 EPC),
    - lack of inventive step (Art. 138(1)(a) in conjunction with Art. 56 EPC).

37. Defendant asserts that claim 1 invalidly claims the priority of its priority document P4 with regard to feature 1.1.4, because the priority document only discloses time-window based and UL-related time unit format information and does not disclose a configuration-period based dual quantity information as content of the time unit format information as foreseen in feature 1.1.4. Defendant argues that feature 1.1.4 requires a time unit information comprising a quantity of time units configured for UL transmission in a configuration period and/or a quantity of time units configured for DL transmission in a configuration period. In contrast, the disclosure of P4 - with regard to the time unit format information comprising a quantity of time units - is limited to time units being configured for uplink transmission within the time window (p. 6 of the description of P4). Defendant opines that Embodiment 3 of P4 (p. 37 of the description of P4) does not directly and unambiguously disclose a time unit format information either, that includes a quantity/number of time units in a configuration period but, at most, discloses to configure the DL/UL transmission direction of each time unit in a period of 5 ms or 10 ms. In Defendant's view, there is no pointer that the configuration discussed in the second paragraph in the section on embodiment 3 in P 4 (p. 37 of the description of P4) relates to the time unit format information. Rather, according to the actual teaching of P4 including Embodiment 3, it is sufficient for the terminal to exclude uplink time units from the time window and to determine the remaining downlink-related feedback bit quantity if the time unit format information identifies the uplink time units within the relevant time window (second paragraph on p. 38, and p. 6/7, of the description of P4).

38. Defendant challenges the validity of independent claims 1, 5, 9 and 10 of the patent-in-suit by relying on lack of novelty in relation to

- the 3GPP technical specifications ETSI TS 138 213 V15.2.0 of July 2018 (exhibit D1A, "**D1A**"), ETSI TS 138 331 V15.2.1 of June 2018 (exhibit D1B, "**D1B**"), and ETSI TS 138 214 V15.2.0 of July 2018 (exhibit D1C, "**D1C**"), asserted as single source of disclosure and regarded as prior art due to the asserted invalid priority claim, whereby Defendant points out that the lack of novelty holds true at least on the basis of Claimant's claim own construction for assessing infringement;

- the contributory document R1-1710729, Samsung, HARQ-ACK codebook determination, Discussion and decision document presented at 3GPP TSG RAN WG1 NR Ad-Hoc#2, Quingdao, P.R. China, 27th – 30th June 2017 (exhibit D2, "**D2**").

39. Defendant challenges the validity of independent claims 1, 5, 9 and 10 of the patent-in-suit in terms of lack of inventive step by relying on

- a combination starting from D2 combined with the contributory document R1-1708890, Final Report of 3GPP TSG RAN WG1 #88bis v1.0.0 (Spokane, USA, 3rd – 7th April 2017) (exhibit D3, "**D3**"), the latter primarily to demonstrate knowledge of the skilled person relevant to the understanding of D2;

- a combination starting from the contributory document R1-1710783, CMCC, Discussion on timing design for semi-static DL/UL assignment, Discussion and decision document presented at 3GPP TSG RAN WG1 Meeting NR Adhoc, Quingdao, P.R. China, 27th – 30th June 2017 (exhibit D4, "**D4**") combined with EP 2 863 574 A1 (exhibit D5, "**EP'574**", "**D5**").

40. The remaining documents exhibit A1, A2 were submitted by Defendant to demonstrate the common general knowledge of the skilled person.

41. Claimant rejects each of these validity attacks. It opines that the subject-matter of claim 1 is directly and unambiguously disclosed in the application as filed (exhibit P3) and the priority document (exhibit P4). Furthermore, it argues that the invention is sufficiently disclosed in the patent-in-suit to be carried out by the skilled person. In Claimant's view, the subject-matter of claim 1 is also novel and involves an inventive step. It is novel in view of D1A to D1A because the patent-in-suit validly claims its priority.

42. Both parties agree that their arguments regarding claim 1 apply to attacked independent claims 5, 9 and 10 *mutatis mutandis*.

43. For further details and the further attacks on validity including those on the relevant dependent claims, it is referred to the parties' briefs and exhibits.

REASONS FOR THE DECISION

44. Both, the Infringement action and the Counterclaim for revocation are admissible. The counterclaim for revocation is well founded and the patent-in-suit in consequence invalid. Therefore, the infringement action is unfounded.

A. ADMISSIBILITY

I. Jurisdiction and competence for the infringement action

45. The international jurisdiction of the UPC for the infringement action finds its basis in Art. 31 UPCA, Art. 4 (1), Art. 63 (1), Art. 71b (1) Brussels Ia Reg, and, in addition, in Art. 31 UPCA, Art. 71b (1), Art. 7 (2) Brussels Ia Reg., because Defendant is domiciled in a member state to the UPCA and, in addition, Claimant asserts that Defendant infringes upon the national parts of the patent-in-suit in relation to the relevant UPCA member states France and Germany (cf. Court of Appeal, order of 30 March 2026, UPC_CoA_899/2025, Sinocare et al v Abbot Diabetes Care, paras. 32 et seq.). Apart from that, the international jurisdiction also follows from Art. 26 Brussels Ia Reg. in the absence of any objection in this regard. The given jurisdiction also extends to acts committed prior to the entry into force of the UPCA on 1 June 2023 (cf. Court of Appeal, Order of 16 January 2025, UPC_CoA_30/2024, Fives ECL v REEL).

46. The competence of the Local Division Mannheim for the infringement action follows from Art. 33 (1) (a) UPCA in view of the alleged infringement of the German national part of the patent-in-suit, which in consequence extends to the French national part (cf. Art. 33 (2) UPCA), and, apart from that, from R. 19.7 RoP in the absence of a preliminary objection pursuant to R. 19 RoP.

II. Jurisdiction and competence for the CCfR

47. The international jurisdiction of the UPC for the counterclaim for revocation follows from Art. 31 UPCA, Art. 71b (1), Art. 24 (4) Brussels Ia Reg. (which applies regardless of the

domicile of the parties), the competence of LD Mannheim from the decision of the panel to proceed pursuant to Art. 33 (3) (a) UPCA.

III. Relevant requests

48. To the extent that the amendments by the parties' briefs of 2 September 2026 with regard to the infringement action and the counterclaim for revocation are amendments in the sense of R. 263 RoP, they are admissible on the instant facts.

49. The amendments by Claimant to its request No. II.2 (communication of information) merely limit the information to be communicated to the pieces of information explicitly listed in the request (R. 263.3 RoP). Claimant's amendments to its requests No. II.4 (corrective measures) limit these measures to products of direct infringement opposed to products of direct and indirect infringement as originally requested (R. 263.3 RoP). With regard to request No. II.4 c (destruction), they furthermore limit the products concerned to products that were the subject-matter of infringing acts in accordance with request No. II.1 a (or at least they clarify this). The amendments to Claimant's requests IV. and V. merely replace a request for specific performance regarding damages that does not specify the amount by a corresponding request for declaratory relief. Apart from the fact, that it limits the claim (R. 263.3 RoP), this amendment that was made in response to possible doubts expressed by the judge-rapporteur as to the wording of the request is admissible, because it does at least neither alter the direction and core of the request nor does it otherwise unreasonably hinder Defendant in the conduct of its action (R. 263.2 RoP).

50. The amendments made by Defendant, in its brief of 2 September 2026, to its revocation request merely clarify and now reflect in the wording of the request that the only UPCA member states concerned are France and Germany. As already stated by Defendant in the reasoning of its counterclaim for revocation (para. 6), these UPCA member states are the sole member states in which the patent-in-suit is in force. At least do the amendments limit the request (R. 263.3 RoP).

B. SUBSTANTIVE SCOPE OF THE PATENT-IN-SUIT

51. The patent-in-suit relates to the field of wireless communications technologies, and in particular, to a method, a terminal device, and a network device for determining feedback information.

52. According to the patent, a known LTE (Long Term Evolution) system uses a hybrid automatic repeat request (hybrid automatic repeat request, HARQ) mechanism to ensure the reliability of physical layer data transmission and transmission efficiency. A receive end feeds back, to a transmit end, a decoding result for data received from the transmit end, namely an acknowledgement (ACK), if the data is decoded correctly, or a negative acknowledgement (NACK) otherwise. The decoding results for a plurality of received transport blocks (TB) may be transmitted using a HARQ feedback codebook included in the Uplink Control Information (UCI), in which the bits correspond to the respective transport blocks and their decoding results (para. [0002]).

53. According to the patent, since a quantity of uplink time units is relatively small, feedback information related to transmission in one or more downlink time units need to be fed back in each uplink time unit. In a TDD (Time Division Duplexing) mode of a LTE system, the terminal device detects downlink (DL) data transmission in a downlink time unit (n-k), and the terminal device sends feedback information in an uplink (UL) time unit n, where $k \in K$ represents timing differences between the k DL time units (n-k) and the one UL time unit n foreseen for their feedback. A (potential) downlink time unit set, whose reception status needs to be fed back in one uplink time unit, is referred to as a time window (also referred to as a bundling window or an associated set (associated sets in the patent-in-suit), and a quantity of time units included in the set is referred to as a time window size (paras. [0013] to [0015]).

54. The patent-in-suit deals with developments in new radio (NR) access technology developed to better meet ever-increasing requirements of service types and their consequences for feedback information. In NR, a shorter time unit (w.r.t LTE) is used for data transmission (paras. [0003], [0004]), and in contrast to LTE, where an LTE time window is fixed by an RRC configuration, a NR-system time window may be dynamic and configurable (para. [0017]). More specifically, to support flexible and dynamic TDD, a time unit may be configured flexibly and dynamically for DL/UL (paras. [108] et seqq., in particular para. [0109], Fig. 14).

55. The patent description largely deals with the fact that, under NR technology, one piece of DCI (Downlink Control Information) schedules a plurality of time units (so-called multi-time-unit scheduling or time unit aggregation, para. [0004]) and how to design HARQ feedback information to ensure understanding consistency (including consistency of bit quantities of feedback information and consistency of decoding results for data in time

units corresponding to bit quantities) between the transmit end and the receive end in a scenario of supporting a flexible quantity of aggregated time units, thereby avoiding occurrence of disorder and ensuring communication reliability and robustness (cf. also the description of the task in paras. [0005], [0023] et seqq.).

56. However, the parties rightfully agree upon the fact, that the subject-matter of the claims as granted does not relate to a solution to that problem and are not embodied in the Embodiments 1 to 2 and 4 to 6 either. This is because the claims as granted do not deal with the specifics of time unit aggregation and the problems of attributing feedback information to the time unit concerned in that context. Rather, the subject-matter of the claims as granted solely relates to Embodiment 3, which is agreed upon by the parties and does not rely on erroneous findings.

57. In Embodiment 3 (paras. [0108] to [0115], undisputedly repeated in paras. [0185] to [192]), feedback information is determined based on time window information and time unit format information. It is explained that, in an NR system, to support flexible and dynamic TDD, a DL/UL transmission direction of each time unit (e.g. a slot, a symbol) may be configured through higher layer signalling and/or physical layer group common DCI for a certain time duration, e.g. 5 ms or 10 ms. Within this period, some fixed resources/time units may be configured for UL transmission, others for DL transmission, some may be reserved resources, and the remaining ones may be flexibly and dynamically designated as DL or UL or reserved/blank resources. When, in such a situation, the terminal device determines the feedback information based on the time window configured by a base station, the DL/UL transmission direction of a time unit further needs to be considered in order to avoid unnecessary feedback overhead. The reason for this is that, due to a flexible and dynamic TDD configuration, a time unit from the time window may actually be configured for UL transmission, so that no feedback information is needed since no data is received by the receive end device on the downlink for that time unit (paras. [0109] et seq., Fig. 14). Such scenario presupposes that the transmitted time window information itself does not already define, or otherwise necessarily contains, the time units configured for downlink.

58. Against this backdrop, the objective problem to be solved may be described so as to reduce, in a scenario where UL/DL can be flexibly and dynamically configured, feedback overhead

in terms of feedback information while ensuring understanding consistency between the transmit end and the receiving end.

59. As a solution, the patent-in-suit proposes in claim 1 a method and in claim 5 a terminal device, the features of which can be structured as follows (feature breakdown by Defendant, accepted by Claimant in its Reply):

Claim 1:

1. A method for processing feedback information, comprising:

1.1 receiving, by a receive end device, time unit format information and a set of hybrid automatic repeat request, HARQ, timing K1 values via radio resource control, RRC, signalings,

1.1.1 wherein each HARQ timing K1 value of the set of HARQ timing K1 values represents a time difference between a time unit for transmitting and bearing a physical downlink shared channel, PDSCH, and a time unit for transmitting a physical uplink control channel, PUCCH, or

1.1.2 wherein each HARQ timing K1 value of the set of HARQ timing K1 values represents a time difference between a time unit of a PDSCH and a time unit of a physical uplink shared channel, PUSCH,

1.1.3 where PUCCH/PUSCH are used to transmit HARQ feedback information corresponding to the PDSCH;

1.1.4 the time unit format information comprises a quantity of time units configured for bearing uplink transmission in a configuration period and/or a quantity of time units configured for bearing downlink transmission in a configuration period;

1.2 determining, by the receive end device, a quantity of HARQ feedback information bits based on the set of HARQ timing K1 values and the time unit format information; and

1.3 sending, by the receive end device, the HARQ feedback information.

Claim 5:

5. A receive end device, comprising:

5.1 a transceiver (2108), configured to receive time unit format information and a set of hybrid automatic repeat request, HARQ, timing K1 values via radio resource control (RRC) signalings,

5.1.1 wherein each HARQ timing K1 value of the set of HARQ timing K1 values represents a time difference between a time unit for transmitting and

bearing a physical downlink shared channel, PDSCH, and a time unit for transmitting a physical uplink control channel, PUCCH, or

5.1.2 wherein each HARQ timing K1 value of the set of HARQ timing K1 values represents a time difference between a time unit of a PDSCH and a time unit of a physical uplink shared channel PUSCH,

5.1.3 where PUCCH/PUSCH are used to transmit HARQ feedback information corresponding to the PDSCH;

5.1.4 the time unit format information comprises a quantity of time units configured for bearing uplink transmission in a configuration period and/or a quantity of time units configured for bearing downlink transmission in a configuration period; and

5.2 a processor (2104), configured to determine a quantity of HARQ feedback information bits based on the set of HARQ timing K1 values and the time unit format information,

5.3 the transceiver is further configured to send the HARQ feedback information to the transmit end device.

60. Some features require explanation. The average person skilled in the art relevant to the case holds a university degree (diploma or master's) in information technology or communications engineering and has several years of practical experience in the development and implementation of mobile communications technologies and is familiar with the underlying standards and follows the standardization discussions. Such skilled person will understand the features as follows. The further details as far as provided by the parties as to the knowledge and experience of the skilled person are not decisive in the case at hand.

Time unit, time unit format and time unit format information

61. It follows from features 1.1.1, 1.1.2 and 1.1.4 that a time unit is a unit of transmission time, which can be configured for transmitting a physical downlink shared channel (PDSCH) or a physical uplink channel (PUCCH, PUSCH). This is confirmed by the description of Embodiment 3, according to which the time units can in particular be configured as a unit for DL or for UL (paras. [108] et seqq.)

62. The term time unit is not further specified in terms of time scale, so that it can address any scale, in particular slots, symbols, and the like (cf. also para. 109]). It also follows, that a time unit within the meaning of claim 1 may have sub-units. For instance, a time unit according to claim 1 may be a slot, that has symbols as sub-units.

63. It further follows from features 1.1.1, 1.1.2 and 1.1.4, that a time unit format at least relates to the configuration in terms of the transmission direction of the time unit (DL, UL or left blank). This is again confirmed by Embodiment 3 (cf. paras. [0109], [0110], Fig. 14).

64. The claim leaves it open, when a time unit is regarded as DL or UL configured and how this is established. The same applies to the description, in particular of Embodiment 3 (paras. [0109] et seqq.). It is in particular possible, that a time unit is considered as configured DL or UL based on the configuration of its sub-units or a group of its sub-units and that the configuration is established accordingly by checking the sub-units. In consequence, whilst the term time unit is the same throughout the claim, and, in particular, in the term time unit format (information), the time unit format can be derived from the configuration of sub-units. For instance, it is in accordance with claim 1 and the term time unit format used therein, if a time unit (e.g. a slot) is considered to be configured for UL, if all relevant sets of its substructures (e.g. symbols) that are potentially foreseen as DL opportunity contain at least one substructure, that is actually configured for UL.

65. The term time unit format information relates to information on the time unit format. According to feature 1.1.4, it must comprise a quantity of time units configured for bearing uplink transmission in a configuration period and/or a quantity of time units configured for bearing downlink transmission in a configuration period. As indicated by the term “comprising” these pieces of information are not exhaustive.

66. Feature 1.1.4 therefore specifies the minimum information content of the time unit format information, that relates to said configuration information. In doing so, it leaves open, whether this minimum information content is contained in the time unit format information as explicit or implicit piece of information. In particular, the wording “time unit format information comprises” covers both explicit and implicit information content. Moreover, the claim leaves it open, whether the time unit format information is received as single item of information or across different items, that are separately received. The description justifies no other results.

67. Whilst paras. [0109], [0110] and Fig. 14 foresee the possibility to already indicate in the pattern of time units/the time unit format information, that some time units may be flexibly and dynamically designated for UL or DL transmission “to support flexible and dynamic TDD”, such requirement is not reflected in claim 1. In consequence, a time unit

format information transmitted via RRC signalling, that does not allow for indicating such time units, that are foreseen for flexible and dynamic designation, is also covered by claim 1.

68. Similarly to the time unit format, information regarding the configuration of a time unit can also relate to the configuration of its sub-units, from which the configuration of a time unit is derivable. Moreover, as the information content of the time unit format information is not exhaustively defined in feature 1.1.4, it is in particular not excluded and therefore also covered by the claim, that the time unit format information additionally contains information on the configuration of the sub-units of a time unit should this not already be considered as information about the configuration of the time unit itself.

Feature 1.1.4 – term "quantity"

69. Quantity within the meaning of feature 1.2 clearly means "number" rather than set/group (the latter meaning that the information includes information on a position), cf. Embodiment 3 (paras. [0110], [0111]: "a quantity of feedback information bits is four bits / the quantity of the feedback information bits is three bits") and other places in the description (cf. para. [0002] ("a bit quantity of the decoding result is a size of the HARQ feedback codebook"), para. [0035] ("A size of the feedback information is related to a maximum quantity of aggregated time units configured by the base station")).

70. While identical terms in a patent claim regularly are to be understood in the same way, a different context may lead to the result that an identical term may have different meanings in the patent claim depending on its context.

71. The term "quantity" appears to be used in both meanings in the patent description, as number and as group/set (cf., e.g., para. [0015] ("a quantity of time units included in the set is referred to as a time window size"), and para. [0031] ("a quantity of time units can be indexed"), respectively).

72. In feature 1.1.4, the term "quantity" is therefore not limited to one of the aforementioned variants of meanings but covers both. While it is sufficient to simply reduce the number of bits in order to achieve a reduction of feedback information, the skilled person understands that the position of the individual time units addressed in claim 1 need to be known. Otherwise, neither the UL/DL configuration nor the time difference (within the meaning of

features 1.1.1 and 1.1.2) of each time unit could not be determined. This view is confirmed by the sole relevant Embodiment 3 (para. [0109] to [0111]), which also presupposes that the receive end device knows the positions of the time units in question. Accordingly, Fig. 14 that is discussed in this context, depicts a pattern of time units. In addition, an explicit number of time units, configured for DL or UL, is not specified in Embodiment 3. This, however, does not exclude from the scope of claim 1, that the receive end device receives time unit format information providing a mere number of DL or UL configured time units in a configuration period, as long as their positions can be derived from this information by taking into account an additional information such as a constraint imposed on the configuration pattern.

Feature 1.1.1 and 1.1.2 – set of HARQ timing K1 values

73. According to features 1.1.1 and 1.1.2, each HARQ timing K1 value of the set of HARQ timing K1 values represents a time difference between a time unit for transmitting and bearing the physical downlink shared channel, PDSCH, on the one hand, and a time unit for transmitting (the corresponding HARQ feedback information) on the physical uplink control channel, PUCCH, or the physical uplink shared channel, PUSCH, on the other hand. The set of HARQ timing K1 values therefore indicates a set of time units, that are (potentially) configured for PDSCH and for which, as the case may be, HARQ feedback information must be given in the thus associated time unit of a PUSCH or PUCCH (cf. paras. [0110] to [0111]). This set of time units indicated by the set of HARQ timing K1 values is also addressed by the patent-in-suit as time window or bundling window (cf. paras. [0015] et seq., [0110] et seq.). It has to be distinguished from the whole set of time units covered by a configuration period according to feature 1.1.4.

74. The slight difference in wording for describing the (potential) use of the time units addressed in features 1.1.1 and 1.1.2 – “time unit for transmitting and bearing a [PDSCH]” (feature 1.1.1) opposed to “time unit for transmitting a [PUCCH]” (feature 1.1.1) and “time unit of a [PDSCH / PUSCH]” (feature 1.1.2) – comes with no difference in the meaning. In both cases, however, it follows from the relationship between features 1.1.1 & 1.1.2 with feature 1.2, this being confirmed by Embodiment 3, that a time unit of a PDSCH indicated by the HARQ timing K1 values is in fact only a candidate for bearing a PDSCH. Indeed, it does not necessarily bear a PDSCH but can actually be configured for UL transmission in the individual case. Otherwise, there would be no need to check the actual DL/UL

configuration of the candidates indicated by the HARQ timing K1 values, and there would also be no possibility of reducing feedback overheads by doing so.

75. In contrast, feature 1.1.4 addresses time units that are actually configured as indicated ("time units configured for bearing uplink transmission … and/or … of time units configured for bearing downlink transmission …"; emphasis added).

Feature 1.2 – basis for the determination step

76. Feature 1.2 requires, that the receive end device determines a quantity of HARQ feedback information bits based on the set of HARQ timing K1 values (features 1.1.1 and 1.1.2) and the time unit format information (feature 1.1.4). According to feature 1.1 both parameters are received via radio resource control, RRC, "signalings", however not necessarily by the same item of signaling.

(i) Time unit format information used is configuration information regarding time units

77. It follows from the systematic relationship between feature 1.2 and feature 1.1.4, that the time unit format information used in feature 1.2 is the time unit format information regarding the UL/DL configuration specified in feature 1.1.4. Otherwise, it would be superfluous to further specify time unit format information as done in feature 1.1.4, if the specifying part of feature 1.1.4 would not be of relevance for the teaching of claim 1. In the absence of any pointer to the opposite, it must be assumed that a feature in a patent claim has a technical significance within the teaching of the claim and contributes to the teaching and its technical effect. Such pointers to the opposite are missing in present case. Rather, the description of Embodiment 3 confirms, that the determination of the quantity of feedback information bits it based on whether a time unit in the time window is configured for UL. Feature 1.1.4 being worded as an open-ended statement, it does not rule out that the time unit format information may encompass other information than the quantity of UL configured time units and/or the quantity of DL configured time units in a configuration period.

78. Furthermore, no limitation to using the quantity as such that is mentioned in feature 1.1.4 (be it a number or a set/group) can be read into the determination step in accordance to feature 1.2 and claim 1. Otherwise, Embodiment 3, that does not use the quantity as such but rather the configuration of the individual time units in question for the determination

process (cf. paras. [0110] to [112]), would be no longer covered by claim 1, (although there is no pointer that would justify such a result). Rather, Embodiment 3 is undisputedly the sole embodiment that relates to the claims as granted. Its description describes the determination process as being based on (i) the set of time units indicated by the set of K1 values (i.e. the time window), for which feedback must potentially be given and on (ii) a check of these time units whether they are configured UL, whereby a time unit in question is excluded from the feedback if it is indeed UL-configured. The introductory part of the description of Embodiment 3, when read as explanatory aid for the interpretation of the patent claim 1 as granted (cf. CoA, order of 26 February 2024, UPC_CoA_335/2023, NanoString v 10x Genomics, headnote 2), considers this kind of determination of feedback information as being based on time window information and time unit format information (slot format information, SFI).

(ii) Time unit information used must relate to the time units indicated by the set of HARQ K1 values

79. It further follows from the systematic relationship between features 1.1.1, 1.1.2, 1.1.4 and 1.2, and from a functional claim construction, that the time unit format information regarding the UL/DL configuration, that is used for the determination step in feature 1.2, must at least relate to the time units indicated by the set of HARQ K1 values. Reference is made to the description of embodiment 3 (paras. [0109] to [111]) already discussed above, and to the goal to reduce feedback overhead (paras. [0110] line 15 and [0111] at the end). The latter is done by excluding, from the set of time units indicated by the set of K1 values (that are potential candidates for time units that are configured for DL), those time units that are actually configured UL and for which, in consequence, there is no need to send a feedback. Against this backdrop, it would not make any technical sense, and not be in line with Embodiment 3 as the sole relevant embodiment, to use, for the determination of the quantity of HARQ feedback information bits according to feature 1.2, (i) the set of time units indicated by the set of K1 values and (ii) time unit format information that relates to other time units. In this context, by referring to a configuration period, feature 1.1.4 simply clarifies, that the time unit format information relates to a configuration period that may differ from, in particular may be broader than, the time window (i.e. set of time units indicated by the set of HARQ K1 values).

(iii) time unit format information and the configuration of sub-units

80. The determination step in accordance with feature 1.2 can encompass DL/UL configuration of sub-units, that are sub-units of a time unit determined by one of the K1 values in accordance with features 1.1.1 and 1.1.2. Defendant follows this interpretation as basis for its novelty attack in view of D1A to D1C, should this interpretation prevail contrary to its view in the infringement proceeding.

81. As already discussed supra in the context of time unit format information, neither the wording of the patent claim nor the description including Embodiment 3 specify, how the configuration of a time unit is defined and how that configuration is established. This holds in particular true in the context of determining the quantity of feedback information bits in accordance with feature 1.2. The claimed method and Embodiment 3 are agnostic about the way the configuration of a time unit is defined and established. It is therefore possible for an implementer of claim 1 to define a time unit as configured for UL or DL based on the configuration of its sub-units. For instance, it is possible to consider a time unit (e.g. a slot) to be configured for UL, if all possible combinations of its sub-units (e.g symbols) contain at least one sub-unit which could be used for DL (DL opportunity) but is actually configured for UL. The underlying configuration information regarding the sub-units is still a time unit format information, because it implicitly gives the configuration of the time unit (cf. supra).

82. While the levels of the time units addressed throughout the claim are necessarily the same, there is, contrary to the Defendant's assertion, no technical reason why the time unit format information could not be established on the basis of sub-units.

(iv) no exhaustiveness of feature 1.2

83. The determination step in accordance with feature 1.2 is not limited to the exclusive use of the parameters mentioned therein. This already stems from the claim wording which simply recites "based on", which rules out exclusivity. There is no sufficient pointer in the description either, that other parameters may not come into play. Apart from that, the determination is still based solely on the time unit format information and the HARQ timing K1 values, even if the configuration of the time units is established based on the configuration of their sub-units. This configuration/setting at the sub-unit level would only give the parameters for establishing the UL/DL configuration, while the relevant piece of

information for determining the quantity of HARQ information bits still remains the information on the time unit format.

84. Again, Defendant follows this interpretation as basis for its novelty attack in view of D1A to D1C, should this interpretation prevail contrary to its view in the infringement proceeding.

Independent claims 5, 9 and 10

85. There is no reason to understand the features discussed above differently in the context of independent claims 5, 9 or 10.

C. COUNTERCLAIM FOR REVOCATION

86. The counterclaim for revocation is well-founded. The subject-matter of claims 1 and 5 goes beyond what is disclosed in the priority application (exhibit P4), so that the patent-in-suit invalidly claims the priority of its priority application and therefore has an application date only of 10 August 2018. The foregoing deficiency applies equally to subclaims 2-3 and 6-8, that are dependent on claim 1 and 5, respectively, and to independent claims 9 and 10, that incorporate in particular the features of claim 1. Due to the invalidity of the priority claim, the attacked claims as granted are not novel in view of D1A to D1C.

87. The deficiency is not removed by any of the Auxiliary Requests of the Application to amend the patent, nor by any of the dependent claims as granted and as defended separately by Claimant. Against this backdrop, there is no need to assess, whether Claimant's defence of dependent claims as granted was sufficiently specified from the outset (cf. CoA, decision of 13 July 2026, UPC_CoA_473/2025 et al, Fujifilm v Kodak).

I. Validity of the priority claim

Legal standard

88. In accordance with Art. 87 EPC a European patent application is only entitled to priority in respect of 'the same invention' as was disclosed in the previous application. The test to be applied in this respect is the same as the disclosure test under Art. 123(2) EPC (added matter) (cf. CoA, decision of 2 June 2026, UPC_CoA_312/2025, Kodak v Fujifilm, para. 97).

89. In order to assess, whether the subject-matter of a claim as granted is disclosed by the content of the previous priority application and therefore validly claims the priority of the patent's priority application, the Court must thus first ascertain what the skilled person would derive directly and unambiguously using his common general knowledge and seen objectively and relative to the date of filing, from the whole of the priority application as filed, whereby implicitly disclosed subject-matter, i.e. matter that is a clear and unambiguous consequence of what is explicitly mentioned, shall also be considered as part of its content (cf., in the context of added matter, UPC_CoA_528/2024, UPC_CoA_529/2024, decision of 25 November 2025, *Amgen v Sanofi*, paras. 53 et seq.; UPC_CoA_382/2024, order of 14 February 2025, *Abbott v Sibio*, para. 52). The assessment is a question of law to be decided on the basis of the facts brought forward by the parties. The facts are the attacked claims and the relevant priority application as whole. Since the test is whether the attacked claims have basis in the priority application as a whole, the Court is allowed to look at the entire priority document and is not restricted to passages invoked by the parties. As for added matter, the underlying rationale for this requirement of disclosure is, that the patentee cannot claim more than he actually contributed to the state of the art at the priority date of the priority application. Therefore, an amendment that is made after that priority date should not provide the skilled person with additional technically relevant information, which was not derivable from the original priority application (cf., in the context of added matter, CD Munich seat, decision of 24 February 2026, UPC_CFI_337/2026, *TCL Europe v Corning*, para. 41; for the rationale: CoA, decision of 25 November 2025, UPC_CoA_528/2024, UPC_CoA_528/2024, *Amgen v Sanofi*, para. 55).

90. When assessing the disclosure content of an (priority) application, hindsight must be avoided. It is not sufficient that the skilled person having the granted patent claim in mind might recognize elements of the granted patent claim in the priority application and assign them accordingly to features of the granted patent. On the contrary, the subject-matter of the granted patent claim must be directly and unambiguously apparent from the content of the priority application, without prior knowledge of the granted patent claim. In other words: it is not sufficient, that one could understand elements form the description of the priority application as having the meaning of features of the granted patent claim. What is required is, that said elements directly and unambiguously disclose that meaning from the perspective of a skilled person, who does not know the granted patent claim.

Case at hand

91. Both parties accept that the certified English translation of the priority application submitted in exhibit P4 is a correct translation of the Chinese priority application, so that the panel, in the absence of better insights, will base its considerations on that translation.

92. The priority application (P4) deals with aspects related to the patent as granted in the so-called fifth aspect of its general description (p. 6/7 of the description of P4, pdf-p. 15/16 of exhibit P4) and in its Embodiment 3 (p. 37-38 of the description of P4, pdf-p. 46/47 of exhibit P4). It is rightfully undisputed that the passage related to fifth aspect of the invention (p. 6-7 of the description) and the description of Embodiment 3 (p. 37-38 of the description) are part of a common disclosure related to the determination of HARQ feedback information in the context of semi-persistent signaling. The description of Embodiment 3 in P4 is essentially identical to its description in the patent-in-suit as granted. However, this does not necessarily mean that their disclosure contents are identical, because the disclosure has to be assessed on the basis of the document as a whole and P4 does not contain patent claims similar to those of the patent-in-suit.

93. According to the claim-like part of the fifth aspect of the invention (p. 6/7 of the description of P4), a method for determining feedback information in accordance with the invention of P4 comprises *inter alia* obtaining, by a receive end device, control information sent by a transmit end device, where the control information includes time window information and time unit format information, and determining, by the receive end device, feedback information based on the time window information and the time unit format information. The term “time window” is further specified on p. 16 of the description of P4, essentially identically to the patent-in-suit (paras. [0015], [0016]). It therefore relates to a set of time units for which potential feedback must be given in a (same) UL-configured time unit. In the more specific part of the fifth aspect, it is explained that, in a possible design, the time unit format information includes configured quantity and/or location information of time units for bearing uplink transmission in a time window. Furthermore, the determination, by the receive end device, of a bit quantity of the feedback information may be based on the time window size and a quantity of time units for bearing uplink transmission configured in the time window (P4, p.6, last paragraph).

94. Nothing in the fifth aspect directly and unambiguously discloses however, that the time unit format information actually relates to a configuration period and not only to the time units of the time window. The term “include” may point to the fact, that the time unit format information not only relates to the configured quantity and/or location information of said UL configured time units in the time window. However, it is still not directly and unambiguously disclosed, that the time unit format information relates to a configuration period. While the term “includes” implies, that the content of the time unit format information is not restricted to what is mentioned in the fifth aspect, it completely leaves open what additional content that might be. For instance, the term “include” could also perfectly address information on other time units in the time window, that are not UL configured.

95. The first paragraph in the section on Embodiment 3 (p. 37-38 of the description of P4) discloses that, in this embodiment, feedback information is determined based on time window information and time unit format information (slot format information, SFI). The second paragraph of the section on Embodiment 3 explains that, in an NR system, to support flexible and dynamic TDD, a DL/UL transmission direction of each time unit (a slot, a symbol, and the like) may be configured through higher layer signaling and/or physical layer group common DCI. The second paragraph then describes a possible implementation, in which one period is configured, for example, and a time duration for the period is 5 ms or 10 ms and in which, within this period, some fixed resources/time units may be configured for UL transmission, other fixed resources/time units may be configured for DL transmission, and some reserved resources may be configured. The remaining resources/time units within the period may be flexibly and dynamically designated as DL or UL or reserved/blank resources. In the following third paragraph, the description of Embodiment 3 discusses the configuration example of Fig. 14 with a period including 10 time units.

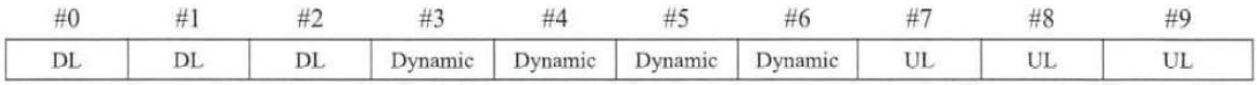

FIG. 14

96. Since Fig. 14, according to said third paragraph, would clearly show that the time units fixedly configured for uplink should not be present in a time window or feedback

information, the description concludes, that, when the terminal determines the feedback information based on the time window configured by a base station, a DL/UL transmission direction for a time unit further needs to be considered, thereby avoiding unnecessary feedback overheads. In the fourth paragraph of the section on Embodiment 3, based on an example with a set of (four) K1 values, the time windows corresponding to UL configured time units #7 and #9, are discussed. In these examples, the bit quantity of feedback information is four bits. In the fifth paragraph of the section on Embodiment 3, it is assumed, that time unit #3 is fixedly configured UL and therefore feedback information fed back in the uplink time units #7 and #9, respectively, does not need to include the time unit #3. Consequently, the terminal device determines that the bit quantity of the feedback information is (now only) three bits instead of the four bits corresponding to the four K1 values.

97. Embodiment 3, even if viewed in combination with the fifth aspect of the invention, does not directly and unambiguously disclose feature 1.1.4 either. It is not directly and unambiguously disclosed, that paragraphs 2 and 3 of the section on the Embodiment 3 specify the time unit format information within the meaning of paragraph 1. They could also merely address the general technical environment, in which the embodiment operates and in which the embodiment determines the bit quantity in accordance with the fourth and fifth paragraph using separate dedicated information. At least, it is not directly and unambiguously disclosed that the information about the configuration, that is used in the fourth and fifth paragraph in the section on Embodiment 3 in order to determine the bit quantity of the feedback information, originates from what is mentioned in the second and third paragraph. It might at most be suggested by Embodiment 3 to re-use, for that purpose, the information addressed in the second and third paragraph that is already available to the device, instead of using separate information, when evaluating, in accordance with the fourth and fifth paragraph, the configuration of individual time units. However, this is not directly and unambiguously disclosed, let alone as part of the invention, in the fifth aspect or in Embodiment 3. Rather, Embodiment 3 solely deals with reducing the feedback overheads and does not address reducing overhead in the downlink direction.

98. Contrary to Claimant's view addressed in the oral hearing, the goal of reducing overhead mentioned on p. 2 of the description of P4 does not yield another result. It is not apparent

that this goal relates to the fifth aspect of the invention and/or Embodiment 3. The same applies in general to the mention of reducing overhead on p. 2-4 of the description of P4. Claimant's argument, that the goal of reducing overhead directly and unambiguously results in understanding Embodiment 3 and the fifth aspect in a way, that the term time unit format information relates to information about the configuration of time units in a configuration period, that is re-used when determining the bit quantity of the feedback information, has therefore no basis.

99. Contrary to Claimant's view expressed in the oral hearing, the terms "time unit information" and/or "slot format information SFI" had no standard meaning well-known to the person skilled in the art at the priority date. Defendant disputed this and asserted the opposite. While Defendant bears the burden of representation and proof for the invalidity of the patent-in-suit, Claimant bears at least a secondary burden of representation to specify the reason/source, why the terms "time unit information" and/or "slot format information SFI" were well-known at the priority date, because Defendant relies on the negative fact that these terms were not well-known at that date. Claimant referred to D4 in the oral hearing to support its view. However, D4 does not contain the term "time unit format information", nor the term "slot format information SFI", it mentions higher layer signaling for the semi-static assignment of DL/UL transmission direction for NR without referring to a term like time unit format information to be used in that sense, let alone as part of common general knowledge. Claimant did not refer to other documents in support of its view that would use the term "time unit format information" or "slot format information SFI", nor did Claimant refer to other (counter-)evidence in this regard.

100. Even if one assumed that paragraph 2 and 3 of the section on Embodiment 3 specify time unit information within the meaning of paragraph 1, which is then used in the determination step described in paragraphs 3 to 5 of Embodiment 3, such time unit information would necessarily include, in addition to a quantity of UL and DL configured time units, a quantity of time units, that will be dynamically configured. This is because, in the envisaged NR system, flexible and dynamic TDD must be supported (cf. paragraph 2 of the section on Embodiment 3). Accordingly, the fifth paragraph of the section on Embodiment 3 points out, that the UL configuration could be equally semi-persistently configured through higher layer signaling and/or dynamically indicated by physical layer signaling, which is also in accordance with the abstract description in paragraph 1 of the

section on Embodiment 3. Against this backdrop, time unit format information, that does not require, that such dynamic and flexible configuration is possible in order to support flexible and dynamic TDD and that does not indicate the time units foreseen for such dynamic and flexible configuration, if any, goes beyond what is disclosed in the section on Embodiment 3.

101. What is discussed supra applies *mutatis mutandis* to independent claim 5 and independent claims 9 and 10 that refer to claim 1.

102. The deficiency is not remedied by any of the Auxiliary Requests 1 and 6 or any of the dependent claims as granted and as defended separately (combination of claims 1 and 2 and combination of claims 5 and 6, further combinations of claims 1 to 3 and claims 5 to 7, respectively). Each of the resulting subject-matters still requires a time unit format information, that comprises a quantity of time units configured for bearing uplink transmission in a configuration period and/or a quantity of time units configured for bearing downlink transmission in a configuration period (feature 1.1.4).

II. Lack of novelty of the patent-in-suit as granted in view of D1A to D1C

103. With the relevant priority date for claim 1 as granted being the patent-in-suit's filing date, D1A to D1C are part of the relevant prior art. Based on the claim construction outlined above, the subject-matter of claim 1 as granted is not novel in view of D1A to D1C.

104. D1A to D1C are a precursor version from June/July 2018 preceding the standard specification Claimant invokes for its infringement case:

Standard specification documents	
invoked for revocation	invoked for infringement
ESTI TS 138 213 V15.2.0 (2018-07) (exhibit D1A)	ETSI TS 138 213 V15.6.0 (2019-07) (exhibit WKS 6)
ETSI TS 138 331 V15.2.1 (2018-06) (exhibit D1B)	ETSI TS 138 331 V15.10.0 (2020-07) (exhibit WKS 8)
ESTI TS 138 214 V15.2.0 (2018-07) (exhibit D1B)	ETSI TS 138 214 V15.3.0 (2018-10) (exhibit WKS 7)

105. It is undisputed that the relevant parts of the versions D1A to D1C, while these versions were not yet fully completed and were still undergoing further development, largely correspond to those of versions WKS 6 to WKS 8.

106. Claimant rightfully does not dispute that the subject-matter of claim 1 is anticipated by D1A to D1C in the absence of a valid priority claim.

107. D1A to D1C undisputedly form a single source of disclosure in the present context relevant to the assessment of the patent-in-suit's novelty. In general, the fact that documents are cross-referenced does not suffice to prove that they form a single disclosure. However, where there is a specific reference in one prior art document (primary document) to a second prior art document (secondary document), when construing the primary document e.g. to give the meaning of a term, such specific reference can result in that the meaning of the term in the secondary document be considered as part of the disclosure of the primary document (cf. in this respect already EPO T 0153/85). This is the case in the present case, because the skilled person analyzing D1A will necessarily resort to D1B for further details, if needed, as will be shown below.

108. Section 9.1 of D1A concerns HARQ-ACK codebook determination.

109. Defendant has provided in exhibit D1Ac a simplified version of the pseudocode set out on pages 38-40 of D1A, similar to the simplified version submitted by Claimant in exhibit WKS 10 for the corresponding pseudocode in WKS 6. This simplification occurs where there is no PDSCH aggregation ($N_{PDSCH}^{repeat} = 1$), i.e. in absence of multiple identical repetitions of the same Transport Block (TB) across consecutive time slots, and where there is only one unicast PDSCH per slot, i.e. the user device (UE) is limited to receive at most one user-specific data transmission on a carrier component (CC).

110. It is sufficient to consider the case concerning the higher layer parameter *tdd-UL-DL-ConfigurationCommon*. In such an instance, the slot format is defined over a number of slots.

111. *tdd-UL-DL-ConfigurationCommon* rightly qualifies as time unit format information within the meaning of the claims since it provides (cf. section 11.1 on page 74 of D1A) the number of slots with only downlink symbols, i.e. DL slots (*nroDownlinkSlots*), and the number of slots with only uplink symbols, i.e. UL slots (*nroUplinkSlots*), within a

configuration period (*dl-UL-TransmissionPeriodicity*). The fact that the UE is also provided with information on the positioning of the individual slot follows from the fact that, as outlined infra, the slot timing values K_1 indicate time differences between a (potential) PDSCH slot and the PUCCH slot *n* where the corresponding HARQ feedback information is reported. This requires that the UE knows the position of the relevant PDSCH and PUCCH slots.

112. *tdd-UL-DL-ConfigurationCommon* is defined as a higher layer parameter and hence construed by the person skilled in the art as a parameter transmitted via RRC signalling without referring to D1B. This is indeed confirmed by D1B. D1B relating to the RRC contains the description of the *tdd-UL-DL-ConfigurationCommon* (pp. 218-220) and will be looked up by the skilled person for further details on its content and way of signalling, if need be. Whilst this already follows from its use in the pseudocode (for details cf. infra), D1B (p. 220) further confirms that *tdd-UL-DL-ConfigurationCommon* also contains information on the configuration of the symbols.

113. By the same token, the UE receives another higher-layer parameter *dl-Data-ToUL-ACK* (section 9.1.2.1 of D1A) which gives in DCI-format 1_1 (section 9.1.2.1(a)(b) of D1A), for a given PUCCH slot *n*, a set of K_1 values $K_{1,k}$ representing the time differences between a potential PDSCH slot $n\text{-}K_{1,k}$ and the PUCCH slot *n* where the corresponding HARQ feedback information is reported. Under certain circumstances, a PUSCH is used instead of a PUCCH (D1a, p. 36, third paragraph in section 9).

114. Hence, the set K_1 defined by *dl-Data-ToUL-ACK* rightly qualifies as a set of HARQ timing K_1 values within the meaning of 1.1.1.

115. The information element *dl-Data-ToUL-ACK* being defined as a higher layer parameter, the person skilled in the art understands that it is transmitted via RRC signalling. This is also confirmed by D1B, p. 152, which the skilled person looks up for the reasons mentioned supra (if need be).

116. It results from the above analysis that document D1A discloses features 1.1, 1.1.1, 1.1.3 and 1.1.4. Being an alternative, no disclosure of feature 1.1.2 is required.

117. Furthermore, the simplified pseudocode set out in D1Ac (which is rightfully not questioned by Claimant) determines a set $M_{A,c}$ of occasions of PDSCH reception for which the UE can transmit corresponding HARQ-ACK information in slot *n* (over PUCCH).

118. In this simplified pseudocode, the index *k* indexing the slot timing values K_1 runs from 0 to $C(K_1)$ where $C(K_1)$ is the cardinality of set K_1 (i.e. the number of values in set K_1).

119. *R* is defined as a set of rows provided by *PDSCH-TimeDomainResourceAllocation*, the information element *PDSCH-TimeDomainResourceAllocation* being understood as configuring a time domain relation between PDCCH and PDSCH (the meaning of *PDSCH-TimeDomainResourceAllocation* is given in D1B, paragraph bridging pages 144 and 145 which the skilled person will again look up if needed).

120. For each value *k*, it is determined whether slot $n\text{-}K_{1,k}$ (hereinafter referred to in short as slot *k*) contains in its row *r* an OFDM symbol configured as UL. In the affirmative, the index of row *r* is excluded from *R*. This step collects the OFDM symbols on the PDSCH channel in slot *k*. A slot *k* is considered not to be an occasion if every row *r* contains at least one OFDM symbol configured as UL. In this case, $R = \emptyset$ and slot *k* is not added as an occasion to $M_{A,c}$.

121. The receiving device (UE) then determines the sequence $\tilde{O}_0, \tilde{O}_1, \ldots, \tilde{O}_{O^{ACK}-1}$ of HARQ-ACK information bits where O^{ACK} is the total number of information bits (D1A, p. 40, 4th paragraph; CCfR, para. 99).

122. M_c is defined as the cardinality of $M_{A,c}$, i.e. the total number of occasions for PDSCH reception or SPS PDSCH release for serving cell *c* (D1A, p. 40, end of the 4th paragraph). As undisputedly stated by Defendant (cf. CCfR, paras. 100 to 102), M_c is equal to the number of information bits, O^{ACK}, where UE is served by one cell (c=0), i.e. the UE is configured for reception of one transport block (i.e. the transport block is transmitted in a single slot).

123. As M_c is used in the pseudocode determining the HARQ-ACK information bits, the UE determines in such a case the quantity of information bits based on the set HARQ timing K_1 values (set K_1 defined by *dl-Data-ToUL-ACK*) and the time unit format information (*tdd-UL-DL-ConfigurationCommon*) in accordance with feature 1.2. Based on the claim construction of claim 1 set out above, it does not matter that the determination whether

a slot in question is considered to be configured for UL is based on the configuration of its symbols, i.e. its sub-units. Similarly, it is irrelevant that the determination is also based on the set of rows *R*.

124. Finally, the HARQ-ACK information bits are transmitted in PUCCH by the UE (D1A, p. 40, 4th paragraph), feature 1.3.

125. In consequence, the subject-matter of claim 1 is disclosed in **D1A** (**D1B** being used only for providing the definition of some information elements transmitted by RRC).

126. The same applies to independent claims 5, 9 and 10.

III. Lack of novelty of the patent-in-suit as defended in an auxiliary way, in view of D1A to D1C

127. Claimant does not assert, that any limited version of the patent-in-suit as defended by it in an auxiliary way is, independently from the version as granted, novel in view of D1A to D1C, if the priority of the patent-in-suit is not valid. Claimant's general statement on prior art documents in this regard does not relate to D1A to D1C as Claimant does not consider these documents as prior art (cf. e.g. Reply I, paras. 250, 295). In consequence, in the absence of any relevant defence of a limited version of the patent-in-suit by Claimant in view of D1A to D1c, the patent-in-suit is to be revoked to the extent it is attacked, i.e. to the extent that its subject-matter goes beyond the subject-matter of its dependent claim 4 as granted and the subject-matter of its independent claims 11 and 12 as granted.

128. Apart from that, D1A indeed discloses the subject-matter of all limited versions of the patent-in-suit as defended by Claimant in an auxiliary way.

Disclosure of claim 2 and 3 and claim 6 and 7 as granted

129. D1A discloses the subject-matter of claims 2 and 3 as granted. Claims 2 and 3 as granted read as follows:

> **2.** The method according to claim 1, wherein the determining, by the receive end device, a quantity of HARQ feedback information bits based on the set of HARQ timing K1 values and the time unit format information comprises:
> determining, by the receive end device, the quantity of the HARQ feedback information bits based on a size of the set of the HARQ timing K1 values and the quantity of time units configured for bearing uplink transmission in a time window, wherein the time window is a downlink time unit set whose HARQ feedback information needs to be fed back in one uplink time unit.
>
> **3.** The method according to claim 2, wherein the determining the quantity of the HARQ feedback information bits comprises:

determining a time unit set based on the size of the set of the HARQ timing K1 values; when the time unit set comprises a time unit used to bear uplink transmission, excluding the time unit used to bear uplink transmission from the time unit set; and
determining the quantity of the HARQ feedback information bits based on the time unit set obtained after excluding the time unit used to bear uplink transmission from the time unit set.

130. With a willingness to understand, the skilled person interprets the definition of time window in claim 2 as meaning, that it contains the time units whose HARQ feedback information potentially (opposed to actually) needs to be fed back in one uplink time unit. If the time window already necessarily contained time units that actually need to be fed back (because they are DL configured) instead of time units, that are merely candidates for such feedback (because they may be actually UL configured in the individual case), the whole teaching would make no sense. The time window is addressed in claim 3 as the time unit set from which the UL configured time units are excluded.

131. Since the priority is not valid for the subject-matter of claim 2 and 3 (cf. supra), D1A to D1C still belong to the prior art. As discussed supra, D1A discloses a set K_1 of K_1 values $K_{1,k}$ representing the time differences between a potential PDSCH slot $n\text{-}K_{1,k}$ (in short hereinafter "slot k") and the PUCCH slot n where the corresponding HARQ feedback information is reported. The set K_1 therefore corresponds to a set of time units, i.e. the slots $n\text{-}K_{1,k}$ with k being the index of the set K_1 , which are potential PDSCH slots, i.e. potential DL configured slots whose HARQ feedback information potentially needs to be fed back in the UL time unit slot n. This set of time units therefore is a time window within the meaning of claim 2. It is immaterial that it might not be expressly named as time window in D1A.

132. As discussed supra, D1A further discloses the determination of the cardinality $C(K_1)$ of set K_1 (i.e. the number of values in set K_1 or the size of this set) and therefore the determination of the size of the set of the HARQ timing K1 values in the determination process of the HARQ feedback information. This cardinality is used in the determination process, because it provides the number of iterations of the `while k < $C(K_1)$` loop in which, for each slot k, the set of rows is checked against a UL configuration. By running the `while r < $C(R)$` loop (within the `while k < $C(K_1)$` loop), a slot k is disregarded as occasion if every of its rows contains at least one symbol that is UL configured. By so doing, the quantity of time units/slots in the time window that are UL-configured is estimated and used in the determination process. In consequence, the additional features of claim 2 are disclosed. Since the slots regarded as UL configured are excluded from contributing to the occasions

$M_{A,c}$ and therefore from the time window the first part of claim 3 is disclosed. As discussed supra, only the number of occasions $M_{A,c}$ after that exclusion determine the quantity of the HARQ feedback information bits. In consequence, the second part of claim 3 is also disclosed. Based on the standard document ETSI TS 138.213 V15.6.0 (exhibit WKS 6) that corresponds to D1A in the relevant points, Claimant comes to the same conclusion within its infringement read (cf. SoC, paras. 152 i.c.w. 135 to 149 (claims 2 and 6), paras. 152 i.c.w. 150 to 151 (claims 3 and 7)).

133. The same considerations apply to the subject-matter of claims 6 and 7 *mutatis mutandis*.

Disclosure of Auxiliary Request 1

134. D1A also discloses the subject-matter of Auxiliary Request 1. In Auxiliary Request 1, the word "or" in the "and/or" conjunction in feature 1.1.4 and in the corresponding feature of claim 5 is deleted, and claim 2 at its beginning is amended as follows:

> 2. The method according to claim 1, wherein the determining, by the receive end device, thea quantity of the HARQ feedback information bits based on the set of

135. Since the priority is not valid for this subject-matter (cf. supra), D1A to D1C still belong to the prior art. As discussed supra, the parameter *tdd-UL-DL-ConfigurationCommon* of D1A contains both a quantity of DL and UL configured time units, i.e. slots. The amendments made to claim 2 are immaterial.

Disclosure of Auxiliary Request 2

136. D1A also discloses the subject-matter of Auxiliary Request 2. In Auxiliary Request 2, in addition to the amendments according to Auxiliary Request 1, features 1.1 and 1.2 are amended as follows:

> *1.1 receiving, by a receive end device, time unit format information and time window information comprising a set of hybrid automatic repeat request, HARQ, timing K1 values via radio resource control, RRC, signalings,*
>
> *1.2 determining, by the receive end device, HARQ feedback information based on the time window information and the time unit format information, which comprises determining, by the receive end device, a quantity of HARQ feedback information bits based on the set of HARQ timing K1 values and the time unit format information; and*

137. Corresponding amendments are made to claim 5.

138. The term “comprising” in feature 1.1 does not require that the time window information contains other information than a set of hybrid automatic repeat request, HARQ, timing K1 values. In consequence, time window information can be realized by a sole set of HARQ timing K1 values.

139. Since the priority is not valid for this subject-matter (cf. supra), D1A to D1C still belong to the prior art. As discussed supra, D1A discloses the use of a set of HARQ timing K1 values in the determination step. The term time window is only a label for the time units indicated by said set of HARQ timing K1 values that are potentially DL configured and whose HARQ feedback information therefore potentially needs to be fed back in the same uplink time unit.

Disclosure of Auxiliary Request 3

140. The subject-matter of Auxiliary Request 3 combines claim 1 and claim 2 and, accordingly, claim 5 and claim 6, each claim, if applicable, as amended by Auxiliary Request 1. It therefore adds nothing novel in view of D1A. Reference is made to the reasoning on claim 2 and Auxiliary Request 1. Since the priority is not valid for the subject-matter of Auxiliary Request 3 (cf. supra), D1A to D1C still belong to the prior art.

Disclosure of Auxiliary Request 4

141. The subject-matter of Auxiliary Request 4 combines claim 1 and claim 2, and, accordingly, claim 5 and claim 6, each claim, if applicable, as amended by Auxiliary Request 2. It therefore adds nothing novel in view of D1A. Reference is made to the reasoning on claim 2 and Auxiliary Request 2. Since the priority is not valid for the subject-matter of Auxiliary Request 4 (cf. supra), D1A to D1C still belong to the prior art.

Disclosure of Auxiliary Request 5

142. The subject-matter of Auxiliary Request 5 combines claim 1, claim 2 and claim 3, and, accordingly, claim 5, claim 6 and claim 7, each claim, if applicable, as amended by Auxiliary Request 1. It therefore adds nothing novel in view of D1A. Reference is made to the reasoning on claim 2, claim 3 and Auxiliary Request 1. Since the priority is not valid for the subject-matter of Auxiliary Request 5 (cf. supra), D1A to D1C still belong to the prior art.

Disclosure of Auxiliary Request 6

143. The subject-matter of Auxiliary Request 6 combines claim 1, claim 2 and claim 3, and, accordingly, claim 5, claim 6 and claim 7, each claim, if applicable, as amended by Auxiliary Request 2. It therefore adds nothing novel in view of D1A. Reference is made to the reasoning on claim 2, claim 3 and Auxiliary Request 2. Since the priority is not valid for the subject-matter of Auxiliary Request 6 (cf. supra), D1A to D1C still belong to the prior art.

IV. Legal consequence

144. In consequence, the patent-in-suit is to be revoked to the extent it is attacked, i.e. to the extent that its subject matter goes beyond the subject matter of dependent claim 4 and the subject matters of independent claims 11 and 12.

D. INFRINGEMENT

145. Since the infringement action is based on the revoked claims 1 and 5 both as granted and amended, the infringement action is dismissed. Therefore, the application, encompassed in Defendant's brief of 6 October 2026, for an order pursuant to R. 190 RoP is dismissed because the licence agreement concerned is not decisive for the decision at hand as it relates to the FRAND defence and, potentially, to exhaustion of rights. For the same reason, the dismissal, by the JR, of Defendant's preceding applications for the production of license agreements and less redacted versions thereof, respectively, that go beyond what was already granted by the Production Order, is ultimately confirmed. Against this backdrop, the panel sees no reason to reopen the oral hearing and to allow for a further exchange of pleadings, as requested by Defendant.

E. COSTS

146. The decision on allocation of the (recoverable) costs is based on Art. 69 (1) UPCA, R. 118.5 RoP.

147. By their briefs of 31 July 2026, the parties identically stated that they have reached an agreement on the recoverable costs. In principle, such an agreement is to be considered when deciding on the recoverable costs. Where possible, an unsuccessful party may be already ordered, by way of specific performance, in the decision on the merits to pay the

successful party the amount of reimbursement that results from such an agreement, which would make a separate cost decision procedure pursuant to R. 150 et seqq. RoP obsolete.

148. In short, the agreement in the case at hand foresees […]. The panel understands this stipulation as requiring the declaration to be made before the reimbursement is processed.

149. The panel refrains from ordering specific performance based on the agreement between the parties in this specific case. It can be left open whether specific performance could be made subject to a declaration to be given by the party who is entitled to reimbursement. In any event, the cost procedure according to R. 150 et seqq. RoP seems to be the best place to establish with legal certainty whether the required declaration is properly made in accordance with the agreement between the parties.

F. VALUE IN DISPUTE

150. After the parties having been heard, the value in dispute for the infringement action and the counterclaim for revocation is set to 3.000.000 EUR in each case.

151. Given the territorial scope of both the infringement action and counterclaim for revocation concerning the two UPCA member states France and Germany, the amount of 1 million Euro indicated by the Claimant and accepted by Defendant for the infringement action as well as the same amount for the counterclaim for revocation as indicated by Defendant seems to be too low, taking into account the size of the markets concerned. An amount of 3 million Euro seems more appropriate. The panel takes into account that Defendant is only a small manufacturer with total revenue (“Liikevaihto” in Finish) having decreased to EUR 522 million in 2024 as stated by Claimant with reference to public sources (cf. brief of 18 May 2026, para. 8). The panel also takes into account that only a minor part of Defendant’s business activities relates to France and Germany. The present infringement action also served the purpose to move forward the licence negotiations concerning Claimant’s relevant SEP portfolio, which had reached a dead end. Whilst the full economic value of the parties’ disagreement on a FRAND licence agreement is irrelevant to the case at hand in the absence of any request to the court to determine or establish with binding effect between the parties what actually is FRAND, the

aforementioned additional economic bearing of the infringement action at hand has to be at least moderately reflected in the value in dispute.

152. The value in dispute for the counterclaim for revocation is set to the same amount, i.e. 3 million EUR. Contrary to Claimant (cf. brief of 18 May 2026, para. 11), and in line with Defendant, who has estimated the value in dispute to be in line with that of the infringement action (cf. CCfR, para. 2), the panel sees no reason to apply a surplus to the value in dispute of the infringement action, when determining the value in dispute for the counterclaim of revocation, especially as the value in dispute of the infringement action also moderately reflects the additional economic bearing of the infringement action.

153. The values in dispute of an infringement action and a related counterclaim are added up to form a total value in dispute for the entire proceedings solely for the purpose of determining the recoverable costs (see Guidelines of the Administrative Committee for the determination of the court fees and the ceiling of recoverable costs, II.2 b) (4) on Counterclaims for revocation) – but not for the purpose of setting court fees.

DECISION:

1. The patent is revoked with respect to France and Germany to the extent that its subject-matter extends beyond the subject-matter of claims 4 and 11-12 as granted.
2. The application to amend the patent is dismissed.
3. The infringement action is dismissed.
4. The Claimant has to bear the costs of the proceedings.
5. The value in dispute for the infringement action and the counterclaim of revocation is set to 3.000.000 EUR in each case.

Delivered in Mannheim on 20 October 2026

NAMES AND SIGNATURES

Presiding judge Tochtermann	*[gez.]*
Legally qualified judge Böttcher	*[gez.]*
Legally qualified judge Schober	*[gez.]*
Technically qualified judge Augarde	*[gez.]*
For the Sub-Registrar: Kranz, Clerk LD Mannheim	*[gez.]*

Information about appeal

An appeal against the present Decision may be lodged at the Court of Appeal, by any party which has been unsuccessful, in whole or in part, in its submissions, within two months of the date of its notification (Art. 73(1) UPCA, R. 220.1(a), 224.1(a) RoP).

An appeal against an order pursuant to Art. Art. 59 UPCA contained in this decision may be brought before the Court of Appeal by any party which has been unsuccessful, in whole or in part, in its submissions within 15 calendar days of the notification of the decision (Art. 73 (2) (a) UPCA, R. 220.1 (c) RoP, R. 224.1 (b) RoP).

Information about enforcement (Art. 82 UPCA, Art. Art. 37(2) UPCS, R. 118.8, 158.2, 354, 355.4 RoP)

The decision has no (directly) enforceable content.